Application No.: 10/814.563 Office Action dated: July 6, 2009

Reply dated: December 7, 2009

In the Claims:

Please amend Claims 1, 4, 8, 11, 15 and 18. Applicant respectfully reserves the right to

prosecute any originally presented claims in a continuing or future application.

1. (Currently Amended) A system that provides a generic user interface testing framework, and allows a user to test and debug graphical user interfaces for software applications under

development, comprising:

a computer including a computer readable medium, and a processor operating thereon;

a software application source code, stored on the computer readable medium, wherein the software application source code defines a software application under development, including a

graphical user interface as part of the software application, and wherein the software application

source code executes on the computer to display its graphical user interface:

a plurality of different software test tools, wherein each software test tool is operable to test a plurality of different graphical user interfaces (GUIs) for a plurality of different software

applications, wherein each GUI is operable to receive a plurality of input commands, and wherein

each software test tool is associated with a different tool-specific scripting language that is an

abstraction of the plurality of input commands for each of the plurality of different GUIs, used only

by that software test tool, that can be invoked by a user to perform testing operations on the

graphical user interface that is displayed while the software application is running, and wherein

each of the plurality of different software test tools use only their associated tool-specific scripting language to test the plurality of different graphical user interfaces associated with the plurality of

different software applications test each GUI;

a test case input file stored on the computer readable medium, that contains a plurality of

directives generic interface commands that are logical abstractions of actions that can be performed on a GUI, independent of any of the tool-specific scripting languages, wherein the test case input

file can be edited and reused as necessary by the user to specify different directives generic

interface commands for testing against a software application's graphical user interface-GUI in any

of the different software test tools: and

an interpretive engine that executes on the computer, and that includes a plurality of

dynamically loaded libraries corresponding to the plurality of different software test tools, and including at least one library for each of the plurality of different software test tools wherein each

library is a group of functions written in each tool-specific scripting language, wherein the

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interpretive engine receives the directives generic interface commands defined in the test case

input file, identifies which libraries are required, loads the required libraries associated with the

software test tool the user is currently using, maps the directives generic interface commands to the software test tool's associated tool-specific scripting language, uses the software test tool to

perform the testing operations on the software application's graphical user interface-GUI using the

associated tool-specific scripting language, and reports to the user the success or failure of the

testing operations.

(Previously Presented) The system of claim 1 wherein the system includes the software test

tools stored locally on a computer processing system containing the user interface testing

framework.

3. (Previously Presented) The system of claim 1 wherein software test tools are stored at

another computer processing system or machine.

4. (Currently Amended) The system of claim 1 further comprising a rules-based wizard that

guides the user to edit or create the test case input file by choosing the testing operations to be

included in the test case input file wherein the rules-based wizard maps the testing operations to

directives generic interface commands.

5 (Canceled).

6. (Previously Presented) The system of claim 1 wherein the test case input file is created

offline and subsequently communicated to the interpretive engine.

7 (Previously Presented) The system of claim 1 wherein any of the software test tools can be

removed and replaced with another software test tool.

(Currently Amended) A method for providing a generic user interface testing framework that

allows a user to test and debug graphical user interfaces for software applications under

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development, comprising the steps of:

executing a software application source code stored on a computer readable medium,

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wherein the software application source code defines a software application under development, including a graphical user interface as part of the software application, and wherein the software the software application source code executes to display its graphical user interface:

providing a plurality of different software test tools, wherein each software test tool is operable to test a plurality of different graphical user interfaces (GUIs) for a plurality of different software applications, wherein each GUI is operable to receive a plurality of input commands, and wherein each software test tool is associated with a different tool-specific scripting language that is an abstraction of the plurality of input commands for each of the plurality of different GUIs, used only by that software test tool, that can be invoked to perform testing operations on the graphical user interface that is displayed while the software application is running, and wherein each of the plurality of different software test tools use only their associated tool-specific-scripting-language to test the plurality of different graphical user interfaces associated with a plurality of different software applications test each GUI:

allowing a user to enter a test case input file stored on the computer readable medium, that contains a plurality of <u>directives generic interface commands</u>-that are <u>logical</u> abstractions <u>of actions</u> that can be <u>performed on a GUI</u>, independent of any of the tool-specific scripting languages, wherein the test case input file can be edited and reused as necessary by the user to specify different <u>directives generic interface commands</u> for testing against a software application's <del>graphical user interface GUI</del> in any of the different software test tools; and

9. (Previously Presented) The method of claim 8 wherein the software test tools are stored locally on a same computer or machine as the software application under development.

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10. (Previously Presented) The method of claim 8 wherein the software test tools are stored at

another computer or machine as the software application under development.

11. (Currently Amended) The method of claim 8 further comprising a rules-based wizard that

guides the user to edit or create the test case input file by choosing the testing operations to be

included in the test case input file wherein the rules-based wizard maps the testing operations to

directives generic interface commands.

12. (Canceled).

13. (Previously Presented) The method of claim 8 wherein the test case input file is created

offline and subsequently communicated to the interpretive engine.

14 (Previously Presented) The method of claim 8 wherein any of the software test tools can be

removed and replaced with another software test tool.

15 (Currently Amended) A computer readable medium including instructions stored thereon

which when executed cause the computer to perform the steps of:

executing a software application source code stored on a computer readable medium, wherein the software application source code defines a software application under development.

including a graphical user interface as part of the software application, and wherein the software the

software application source code executes to display its graphical user interface;

providing a plurality of different software test tools, wherein each software test tool is operable to test a plurality of different graphical user interfaces (GUIs) for a plurality of different

software applications, wherein each GUI is operable to receive a plurality of input commands, and

wherein each software test tool is associated with a different tool-specific scripting language that is

an abstraction of the plurality of input commands for each of the plurality of different GUIs, used

only by that software test tool, that can be invoked to perform testing operations on the graphical

user interface that is displayed while the software application is running, and wherein each of the

plurality of different software test tools use only their associated tool-specific scripting language to

test the plurality of different graphical user interfaces associated with a plurality of different software

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applications test each GUI:

allowing a user to enter a test case input file stored on the computer readable medium, that contains a plurality of directives generic interface commands that are logical abstractions of actions

that can be performed on a GUI, independent of any of the tool-specific scripting languages,

wherein the test case input file can be edited and reused as necessary by the user to specify different directives generic interface commands for testing against a software application's graphical

user interface-GUI in any of the different software test tools; and

using a plurality of dynamically loaded libraries corresponding to the plurality of different

software test tools, and including at least one library for each of the a plurality of different software test tools wherein each library is a group of functions written in each tool-specific scripting

language, to receive the directives generic interface commands defined in the test case input file,

identify which libraries are required, load the required libraries associated with the software test tool

the user is currently using, map the directives generic interface commands to the software test

tool's associated tool-specific scripting language, use the software test tool to perform the testing

operations on the software application's  $\underline{\mbox{\it graphical user interface}\mbox{\it GUI}},$  including translating the

 $\underline{\text{directives}}$  generic interface commands—to tool-specific commands, and report to the user the

success or failure of the testing operations.

16-17 (Canceled).

18. (Currently Amended) The computer readable medium of claim 15 further comprising a rules-

based wizard that guides the user to edit or create the test case input file by choosing the testing

operations to be included in the test case input file wherein the rules-based wizard maps the testing

operations to  $\underline{\text{directives}}$  generic interface commands.

19. (Canceled).

20. (Previously Presented) The computer readable medium of claim 15 wherein the test case

input file is created offline and subsequently communicated to the interpretive engine.

21. (Previously Presented) The computer readable medium of claim 15 wherein any of the test

software tools can be removed and replaced with another test software tool.

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22.

(Previously Presented) The system of claim 1, wherein the system defines a contract

interface for use as an entry point in loading the libraries corresponding to the plurality of different software test tools, and wherein additional software test tools that use a different scripting language

can be dynamically plugged into the system at the entry point by defining an execution interface of

those additional software test tools to comply with the contract interface.

23. (Previously Presented) The method of claim 8, further comprising defining a contract

interface for use as an entry point in loading the libraries corresponding to the plurality of different

software test tools, wherein additional software test tools that use a different scripting language can be dynamically plugged in at the entry point by defining an execution interface of those additional

software test tools to comply with the contract interface.

24. (Previously Presented) The computer readable medium of claim 15 further comprising

instructions which when executed cause the computer to perform the additional step of defining a

contract interface for use as an entry point in loading the libraries corresponding to the plurality of

different software test tools, wherein additional software test tools that use a different scripting

language can be dynamically plugged in at the entry point by defining an execution interface of

those additional software test tools to comply with the contract interface.

25. (Previously Presented) The system of claim 1 wherein each software test tool is used only

for execution of the test case input file, and the test case input file is built independently of any

software test tool.

26. (Previously Presented) The system of claim 1 wherein a first tool-specific scripting language

associated with a first software test tool is mapped to a second tool-specific scripting language

associated with a second software test tool, enabling test cases written in the second tool-specific

scripting language to be executed by the first software test tool.

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